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| 10/591,651 | 07/20/2007 | Michael Winik | WINIK=1 | 1813 |
| 1444 7590 11/23/2010 Browdy and Neimark, PLLC 1625 K Street, N.W. Suite 1100 Washington, DC 20006 | | | | |
| EXAMINER | | | | |
| FINEMAN, LEE A | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/591,651

Applicant(s)

WINIK ET AL.

Examiner

LEE FINEMAN

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2010 and 10 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 4,8,10-17 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,9 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/20/07, 1/31/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species I and b in the reply filed on 10 June 2010 is acknowledged. The traversal is on the ground(s) that search and examination of the entire application would not place a serious burden on the examiner. This is not found persuasive because as stated in the restriction these inventions have acquired a separate status in the art because of their separate species and recognized divergent subject matter. Further, the applicant has failed to provide any evidence as to why the examination of the entire application would not place a serious burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 4, 8, 10-17, 19-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10 June 2010. Further, regarding claim 21 applicant stated that this claim is directed to the elected species and regarding claim 22 applicant failed to state whether this claim was directed to the elected species (see amendment filed 10 August 2010). However, the side facets included in these claims are clearly drawn to species II or III, which is/are non-elected. Therefore, claims 21 and 22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 12 and 100.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 1-3, 5-7, 9 and 18 are objected to because of the following informalities:

Regarding claims 1 and 18, the limitation "so as to provide an effect of total internal reflection within a spectral range including short wavelength of about 180 nm" is grammatically incorrect. The examiner suggests --so as to provide an effect of total internal reflection within a spectral range including a short wavelength of about 180 nm--.

The dependent claims inherit the deficiencies of the claims from which they depend. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claims 1-3, 5-7, 9 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In independent claims 1 and 18, the limitation “matching said dispersion profiles $n_o(\lambda)$ and $n_e(\lambda)$ ” includes the term “matching” which is unclear. Matching is generally defined to be equal to or an exact counterpart to something. However, fig. 4 of the specification shows the dispersion profiles of profiles $n_o(\lambda)$ and $n_e(\lambda)$ do not equal that of the binding materials G_1 , G_2 or the preferred G_3 . Therefore, it is unclear what is matched. Is it the shape of the curve? The slope? or something else?

Regarding claims 9, the term “few” is a relative term which renders the claim indefinite. The term “few” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The dependent claims inherit the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 6-7 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Appel, R et al., "Design of a broadband UV-Visible α -barium borate polarizer," APPLIED OPTICS OPT. SOC. AMERICA USA, vol. 41, no. 13, 2002, pages 2470-2480, XP002311144, ISSN: 0003-6935 (henceforth Appel).

Regarding claims 1 and 18, Appel discloses in fig. 3(c) a polarizer device of Glan-Thompson type comprising first and second prisms made of a birefringent material having certain dispersion profiles $n_o(\lambda)$ and $n_e(\lambda)$ for, respectively ordinary and extraordinary polarization axis (page 2472, column 1, lines 16-25, inherently the prisms will have dispersion profiles) and being coupled to each other by a binding material layer (cement, see at least caption of fig. 3), wherein said binding material has a dispersion profile, $n_g(\lambda)$, matching said dispersion profiles $n_o(\lambda)$ and $n_e(\lambda)$ (is as much as can be understood in light of the 112 rejection set forth above) so as to provide an effect of total internal reflection within a spectral range including short wavelength of about 190nm (see abstract and (page 2472, column 1, lines 16-51). The method of utilizing the structure of the claim is inherent therein.

Regarding claim 2, Appel further discloses wherein the prisms are made of α -BBO crystals (page 2472, column 1, line 25).

Regarding claims 6-7, Appel further discloses wherein the binding material has controlled volatility (in at least so far as it must have set points of change, which would be considered its control points) and low viscosity (at least compared to other materials with a higher viscosity).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Appel.

Appel discloses the claimed invention except for explicitly stating wherein the first and second prisms have a cut angle θ' of about 31° . It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the first and second prisms have a cut angle θ' of about 31° , since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. One would have been motivated to make the first and second prisms have a cut angle θ' of about 31° for the purpose of to provide specific polarizer size (see Appel, page 2473, column 1, lines 11-14). *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

10. Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appel in view of Taniguchi, US 5,683,480.

Appel discloses the claimed invention except for wherein said binding material is a two-part material and wherein said binding material layer has a thickness of a few microns. Taniguchi teaches using a Glan-Thompson type polarizer (column 5, lines 22-27) in a deep ultraviolet wavelength range (column 1, lines 59-62) having a binding material which is a two-part material

(column 2, lines 61-67) and has a thickness of a few microns (column 5, line 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the binding material of Appel with that of Taniguchi to provide higher binding strength without absorbing the ray (Taniguchi, column 1, lines 38-62).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE FINEMAN whose telephone number is (571)272-2313. The examiner can normally be reached on Monday - Friday 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner, Art Unit 2872

19 November 2010